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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/594,495	Applicant(s) OHMI ET AL.
	Examiner Rudy Zervigon	Art Unit 1716

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If no period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 26 March 2010.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-53 is/are pending in the application.
 4a) Of the above claim(s) 21 and 25-53 is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-20 and 22-24 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
 3) Information Disclosure Statement (PTO/8608)
 Paper No(s)/Mail Date 9/22/09, 9/28/06
- 4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date: _____
 5) Notice of Informal Patent Application
 6) Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group I, 1-20, and 22-24 in the reply filed on March 26, 2010 is acknowledged.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 22 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention. The claimed "pressure region" suggests a range of pressure values that is not disclosed in the specification as filed. The Examiner cannot make a prior art rejection of claim 22 unless said range is specified.

Art Unit: 1716

6. Claim 22 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Examiner cannot make a prior art rejection of claim 22 unless said "pressure region" range is specified in the claim itself, or by reference/support in the specification. See above.

7. Claims 23 and 24 provide for the use of the apparatus of claim 12, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claims 23 and 24 are rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1-14, 17-19, 23, and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by Uchida; Kiyoshi et al. (US 5068871 A). Uchida teaches a film-forming apparatus (Figure 1; column 5; lines 36-64) characterized by comprising a container (3; Figure 1; column 5; lines 36-

64) to be depressurized, a depressurizing mechanism ("vacuum pump (not shown)"; column 5; lines 45-50) directly or indirectly coupled to said container (3; Figure 1; column 5; lines 36-64), a film-forming material (can be mixed with 14; Figure 1) supply apparatus (All below 41; Figure 1; column 5; lines 36-64) located inside or outside said container (3; Figure 1; column 5; lines 36-64) and directly or indirectly coupled to said container (3; Figure 1; column 5; lines 36-64) for supplying a film-forming material (can be mixed with 14; Figure 1) or a film-forming material precursor (can be mixed with 14; Figure 1), and a substrate-placing portion (21, Figure 1; column 5; lines 45-50) located in said container (3; Figure 1; column 5; lines 36-64) for placing a substrate (4; Figure 1; column 5; lines 30-50) on which the film-forming material (can be mixed with 14; Figure 1) is deposited, wherein said film-forming material (can be mixed with 14; Figure 1) supply apparatus (All below 41; Figure 1; column 5; lines 36-64) has at least an evaporation mechanism (13, 14; Figure 1; column 6; lines 12-35) for evaporating said film-forming material (can be mixed with 14; Figure 1) or said film-forming material precursor (can be mixed with 14; Figure 1) and a portion of said evaporation mechanism (13, 14; Figure 1; column 6; lines 12-35), to which said film-forming material (can be mixed with 14; Figure 1) or said film-forming material precursor (can be mixed with 14; Figure 1) is to be contacted, is composed of a material having a low gas discharge or a material having a low catalytic effect, as claimed by claim 1. With respect to Applicant's claim requirement of "...evaporation mechanism for evaporating said film-forming material or said film-forming material precursor..", it is noted that the claimed material / material precursor can be mixed with Uchida's heating elements 14 to sublime or evaporate. When the structure recited in the reference is substantially identical to that of the claims, claimed properties or functions are presumed to be inherent (In re Best, 562

F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977); MPEP 2112.01). With respect to Applicant's claim requirement of "is composed of a material having a low gas discharge or a material having a low catalytic effect", this is understood to be an intended use recitation of the pending apparatus claims. Further, it has been held that claim language that simply specifies an intended use or field of use for the invention generally will not limit the scope of a claim (Walter, 618 F.2d at 769, 205 USPQ at 409; MPEP 2106). Additionally, in apparatus claims, intended use must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim (In re Casey, 152 USPQ 235 (CCPA 1967); In re Otto, 136 USPQ 458, 459 (CCPA 1963); MPEP 2111.02).

Uchida further teaches:

- i. A film-forming apparatus (Figure 1; column 5; lines 36-64) according to claim 1, characterized by comprising a transport gas-supplying mechanism (from "bomb"; not shown; Figure 1; column 7; lines 1-5) for supplying a gas that transports the evaporated film-forming material (can be mixed with 14; Figure 1) or film-forming material precursor (can be mixed with 14; Figure 1) to a surface of said substrate (4; Figure 1; column 5; lines 30-50), as claimed by claim 2
- ii. A film-forming apparatus (Figure 1; column 5; lines 36-64) according to claim 1, characterized in that said evaporation mechanism (13, 14; Figure 1; column 6; lines 12-35) comprises a heating mechanism (13, 14; Figure 1; column 6; lines 12-35) for heating said film-forming material (can be mixed with 14; Figure 1) or said film-forming material precursor (can be mixed with 14; Figure 1) to a first temperature equal to or higher than

- an evaporation temperature at which said film-forming material (can be mixed with 14; Figure 1) or said film-forming material precursor (can be mixed with 14; Figure 1) is evaporated, and a predetermined portion (14; Figure 1; column 6; lines 12-35) inside said container (3; Figure 1; column 5; lines 36-64) is heated to a second temperature exceeding said evaporation temperature, as claimed by claim 3. Applicant's claim requirement of "...equal to or higher than an evaporation temperature at which said film-forming material or said film-forming material precursor is evaporated.." is an intended use claim requirement in the pending apparatus claims. Further, it has been held that claim language that simply specifies an intended use or field of use for the invention generally will not limit the scope of a claim (Walter , 618 F.2d at 769, 205 USPQ at 409; MPEP 2106). Additionally, in apparatus claims, intended use must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim (In re Casey,152 USPQ 235 (CCPA 1967); In re Otto , 136 USPQ 458, 459 (CCPA 1963); MPEP2111.02).
- iii. A film-forming apparatus (Figure 1; column 5; lines 36-64) according to claim 3, characterized in that a temperature of said substrate (4; Figure 1; column 5; lines 30-50) is maintained at a third temperature (via 23,24; Figure 1) lower than said evaporation temperature, as claimed by claim 4.
 - iv. A film-forming apparatus (Figure 1; column 5; lines 36-64) according to claim 3, characterized in that said first temperature and said second temperature are lower than a temperature at which the evaporated film-forming material (can be mixed with 14; Figure

- 1) or film-forming material precursor (can be mixed with 14; Figure 1) is decomposed, as claimed by claim 5. Applicant's claim requirement is an intended use claim requirement for the pending apparatus claims. Further, it has been held that claim language that simply specifies an intended use or field of use for the invention generally will not limit the scope of a claim (Walter , 618 F.2d at 769, 205 USPQ at 409; MPEP 2106). Additionally, in apparatus claims, intended use must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim (In re Casey,152 USPQ 235 (CCPA 1967); In re Otto , 136 USPQ 458, 459 (CCPA 1963); MPEP2111.02).
- v. A film-forming apparatus (Figure 1; column 5; lines 36-64) according to claim 3, characterized in that said second temperature is higher than said first temperature, as claimed by claim 6. Applicant's claim requirement is an intended use claim requirement for the pending apparatus claims. Further, it has been held that claim language that simply specifies an intended use or field of use for the invention generally will not limit the scope of a claim (Walter , 618 F.2d at 769, 205 USPQ at 409; MPEP 2106). Additionally, in apparatus claims, intended use must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim (In re Casey,152 USPQ 235 (CCPA 1967); In re Otto , 136 USPQ 458, 459 (CCPA 1963); MPEP2111.02).

- vi. A film-forming apparatus (Figure 1; column 5; lines 36-64) according to claim 3, characterized in that said second temperature is higher than said first temperature by 20°C. or more (column 3; lines 55-56), as claimed by claim 7
- vii. A film-forming apparatus (Figure 1; column 5; lines 36-64) according to claim 4, characterized in that said third temperature is equal to or lower than said evaporation temperature, as claimed by claim 8. Because Applicant's claimed "third temperature" depends on the "evaporation temperature", and the evaporation temperature is a function of the non-structural precursor material, the claim is believed to recite and intended use in the pending apparatus claims. Further, it has been held that claim language that simply specifies an intended use or field of use for the invention generally will not limit the scope of a claim (Walter , 618 F.2d at 769, 205 USPQ at 409; MPEP 2106). Additionally, in apparatus claims, intended use must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim (In re Casey,152 USPQ 235 (CCPA 1967); In re Otto , 136 USPQ 458, 459 (CCPA 1963); MPEP2111.02).
- viii. A film-forming apparatus (Figure 1; column 5; lines 36-64) according to claim 8, characterized in that said film-forming material (can be mixed with 14; Figure 1) is a material for organic EL and said third temperature is less than 100°C, as claimed by claim 9. Because Applicant's claimed "third temperature" depends on the "evaporation temperature", and the evaporation temperature is a function of the non-structural precursor material, the claim is believed to recite and intended use in the pending

apparatus claims. Further, the claimed “is a material for organic EL” is also a recitation of intended use. Further, it has been held that claim language that simply specifies an intended use or field of use for the invention generally will not limit the scope of a claim (Walter , 618 F.2d at 769, 205 USPQ at 409; MPEP 2106). Additionally, in apparatus claims, intended use must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim (In re Casey,152 USPQ 235 (CCPA 1967); In re Otto , 136 USPQ 458, 459 (CCPA 1963); MPEP2111.02).

- ix. A film-forming apparatus (Figure 1; column 5; lines 36-64) according to claim 3, characterized in that said predetermined portion (14; Figure 1; column 6; lines 12-35) is a portion adapted to contact the evaporated film-forming material (can be mixed with 14; Figure 1) or film-forming material precursor (can be mixed with 14; Figure 1) and excluding said substrate (4; Figure 1; column 5; lines 30-50) and said substrate (4; Figure 1; column 5; lines 30-50) holding portion, as claimed by claim 10
- x. A film-forming apparatus (Figure 1; column 5; lines 36-64) according to claim 2, characterized in that said transport gas-supplying mechanism (from “bomb”; not shown; Figure 1; column 7; lines 1-5) comprises a portion (17b) adapted to introduce said transport gas from the outside into a container (3; Figure 1; column 5; lines 36-64) holding said film-forming material (can be mixed with 14; Figure 1) or said film-forming material precursor (can be mixed with 14; Figure 1) and a gas ejection portion (16; Figure 1) having a plurality of small holes and located so as to face said substrate (4; Figure 1;

- column 5; lines 30-50), and said gas transports said evaporated film-forming material (can be mixed with 14; Figure 1) or film-forming material precursor (can be mixed with 14; Figure 1) to the surface of said substrate (4; Figure 1; column 5; lines 30-50) through said gas ejection portion (16; Figure 1), as claimed by claim 11
- xi. A film-forming apparatus (Figure 1; column 5; lines 36-64) according to claim 2, characterized in that said transport gas-supplying mechanism (from “bomb”; not shown; Figure 1; column 7; lines 1-5) comprises a mechanism (17b) for supplying said transport gas from the outside so as to contact said evaporated film-forming material (can be mixed with 14; Figure 1) or film-forming material precursor (can be mixed with 14; Figure 1) and a mechanism (16) for ejecting the transport gas containing said evaporated film-forming material (can be mixed with 14; Figure 1) or film-forming material precursor (can be mixed with 14; Figure 1) toward said substrate (4; Figure 1; column 5; lines 30-50), as claimed by claim 12
- xii. A film-forming apparatus (Figure 1; column 5; lines 36-64) according to claim 12, characterized in that said mechanism (16) for ejecting comprises a shower plate or a plate comprised of a porous material, as claimed by claim 13
- xiii. A film-forming apparatus (Figure 1; column 5; lines 36-64) according to claim 1, characterized in that said evaporation mechanism (13, 14; Figure 1; column 6; lines 12-35) is configured to evaporate said film-forming material (can be mixed with 14; Figure 1) or said film-forming material precursor (can be mixed with 14; Figure 1) during execution of film formation and to stop evaporation during non-execution of film formation, as claimed by claim 14. Applicant’s claim requirements are claim

- requirements of intended use in the pending apparatus claims. Further, it has been held that claim language that simply specifies an intended use or field of use for the invention generally will not limit the scope of a claim (Walter , 618 F.2d at 769, 205 USPQ at 409; MPEP 2106). Additionally, in apparatus claims, intended use must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim (In re Casey,152 USPQ 235 (CCPA 1967); In re Otto , 136 USPQ 458, 459 (CCPA 1963); MPEP2111.02).
- xiv. A film-forming apparatus (Figure 1; column 5; lines 36-64) according to claim 12, characterized in that said gas is a xenon (Xe) gas, as claimed by claim 17. Applicant's claim requirements are claim requirements of intended use in the pending apparatus claims. Further, it has been held that claim language that simply specifies an intended use or field of use for the invention generally will not limit the scope of a claim (Walter , 618 F.2d at 769, 205 USPQ at 409; MPEP 2106). Additionally, in apparatus claims, intended use must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim (In re Casey,152 USPQ 235 (CCPA 1967); In re Otto , 136 USPQ 458, 459 (CCPA 1963); MPEP2111.02).
- xv. A film-forming apparatus (Figure 1; column 5; lines 36-64) according to claim 2, characterized in that said gas contains an inert gas as a main component, as claimed by claim 17. Applicant's claim requirements are claim requirements of intended use in the

pending apparatus claims. Further, it has been held that claim language that simply specifies an intended use or field of use for the invention generally will not limit the scope of a claim (Walter , 618 F.2d at 769, 205 USPQ at 409; MPEP 2106). Additionally, in apparatus claims, intended use must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim (In re Casey,152 USPQ 235 (CCPA 1967); In re Otto , 136 USPQ 458, 459 (CCPA 1963); MPEP2111.02).

- xvi. A film-forming apparatus (Figure 1; column 5; lines 36-64) according to claim 2, characterized in that said gas contains at least one of nitrogen (N), Xe, Kr, Ar, Ne, and He, as claimed by claim 19. Applicant's claim requirements are claim requirements of intended use in the pending apparatus claims. Further, it has been held that claim language that simply specifies an intended use or field of use for the invention generally will not limit the scope of a claim (Walter , 618 F.2d at 769, 205 USPQ at 409; MPEP 2106). Additionally, in apparatus claims, intended use must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim (In re Casey,152 USPQ 235 (CCPA 1967); In re Otto , 136 USPQ 458, 459 (CCPA 1963); MPEP2111.02).
- xvii. An organic EL device having an organic EL layer formed by the use of the film-forming apparatus (Figure 1; column 5; lines 36-64) according to claim 12, as claimed by claim 23. Applicant's claim requirements are claim requirements of intended use in the pending

apparatus claims. Further, it has been held that claim language that simply specifies an intended use or field of use for the invention generally will not limit the scope of a claim (Walter , 618 F.2d at 769, 205 USPQ at 409; MPEP 2106). Additionally, in apparatus claims, intended use must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim (In re Casey,152 USPQ 235 (CCPA 1967); In re Otto , 136 USPQ 458, 459 (CCPA 1963); MPEP2111.02).

- xviii. An electronic device having a film layer of a predetermined material formed by the use of the film-forming apparatus (Figure 1; column 5; lines 36-64) according to claim 12, as claimed by claim 24. Applicant's claim requirements are claim requirements of intended use in the pending apparatus claims. Further, it has been held that claim language that simply specifies an intended use or field of use for the invention generally will not limit the scope of a claim (Walter , 618 F.2d at 769, 205 USPQ at 409; MPEP 2106). Additionally, in apparatus claims, intended use must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim (In re Casey,152 USPQ 235 (CCPA 1967); In re Otto , 136 USPQ 458, 459 (CCPA 1963); MPEP2111.02).

Claim Rejections - 35 USC § 103

- 10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 15, 16, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uchida; Kiyoshi et al. (US 5068871 A) in view of Sekine; Makoto et al. (US 6334928 B1). Uchida is discussed above. Uchida does not teach:

- i. A film-forming apparatus (Figure 1; column 5; lines 36-64) according to claim 1, characterized in that said depressurizing mechanism (“vacuum pump (not shown)”; column 5; lines 45-50) maintains the inside of said container (3; Figure 1; column 5; lines 36-64) at a pressure of 10 mTorr to 0.1 mTorr (column 8; lines 6-18) during execution of film formation, as claimed by claim 15.
- ii. A film-forming apparatus (Figure 1; column 5; lines 36-64) according to claim 15, characterized in that said depressurizing means causes a gas flow in said container (3; Figure 1; column 5; lines 36-64) to be in a molecular flow region during the execution of film formation and causes a gas flow in said container (3; Figure 1; column 5; lines 36-64) to be in an intermediate flow region or a viscous flow region at least for a certain period during non-execution of film formation, as claimed by claim 16. However, the entire claim is a claim requirement of intended use in the pending apparatus claims. Further, it has been held that claim language that simply specifies an intended use or field of use for the invention generally will not limit the scope of a claim (Walter , 618 F.2d at 769, 205 USPQ at 409; MPEP 2106). Additionally, in apparatus claims, intended use must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art

structure is capable of performing the intended use, then it meets the claim (*In re Casey*, 152 USPQ 235 (CCPA 1967); *In re Otto*, 136 USPQ 458, 459 (CCPA 1963); MPEP2111.02).

- iii. A film-forming apparatus (Figure 1; column 5; lines 36-64) according to claim 1, characterized in that said depressurizing mechanism ("vacuum pump (not shown)"; column 5; lines 45-50) comprises a turbo-molecular pump and a roughing vacuum pump and a portion for supplying an inert gas is provided between said turbo-molecular pump and said roughing vacuum pump, as claimed by claim 20

Sekine teaches a semiconductor processing apparatus (Figure 9) including a TMP (4) and "roughing pump" (5) with inert gas injection ("Purging N2") at the roughing pump.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add Sekine's exhaust system and an additional inert gas purge in between Sekine's TMP and roughing pump under optimized operation.

Motivation to add Sekine's exhaust system and an additional inert gas purge in between Sekine's TMP and roughing pump under optimized operation is for preventing Uchida's pump from corrosion as taught by Sekine (column 2; lines 50-63).

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

US 20030136516 A1

US 7524481 B2

US 7481889 B2

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US 7156950 B2

US 7132128 B2

US 7078072 B1

US 6202591 B1

US 5399199 A

US 5252131 A

US 5180436 A

US 5160544 A

US 5071678 A

US 5054420 A

US 5019531 A

US 3640689 A

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Rudy Zervigon whose telephone number is (571) 272-1442. The examiner can normally be reached on a Monday through Thursday schedule from 8am through 6pm EST. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Any Inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Chemical and Materials Engineering art unit receptionist at (571) 272-1700. If the examiner can not be reached please contact the examiner's supervisor, Parviz Hassanzadeh, at (571) 272- 1435.

/Rudy Zervigon/

Primary Examiner, Art Unit 1792